

REMARKS

The present Amendment amends claims 88, 96, 100, 101 and 104, leaves claims 89-95, 97-99, 102 and 103 and adds new claims 105-107. Therefore, the present application has pending claims 88-107.

Claims 88-99 and 104 stand rejected under 35 USC §103(a) as being unpatentable over Crawford (U.S. Patent No. 5,771,354) in view of Attanasio (U.S. Patent No. 5,668,943); and claims 88-104 stand rejected under 35 USC §102(e) as being anticipated by Attanasio. These rejections are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 88-104 are not taught or suggested by Crawford or Attanasio whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to each of the claims to more clearly recite that the disk request processing section is separate from the processor and that the disk request processing section performs operations in response to the disk request issued by the processor. These features of the present invention are illustrated, for example, in Fig. 1 of the present application wherein the disk request processing section 110 is shown to be separate from the processor 101.

The above described features of the present invention allows for the processing of a disk request to be conducted by the disk request processing section 110 separate from the processor 101 so as to reduce the load on the processor 101 which must

perform all other functions of the computer. Thus, the present invention offers unique advantages over that of conventional apparatus being that the load on the processor is significantly reduced since it need not perform the processing of disk requests as in conventional apparatus.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Crawford or Attanasio whether taken individually or in combination with each other as suggested by the Examiner.

Crawford as has been argued in each of the previous Amendments, namely the July 8, 2003, January 5, 2004 and the March 29, 2004 Amendments, fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Particularly, as has been shown, Crawford is merely directed to an internet online backup system which does not have any way of providing in each computer, separate from the processing of the computer, a disk request processing section for processing disk requests that may request access to a shared disks to another computer on the internet. At no point is there any teaching or suggestion in Crawford of a disk request processing section, included within each computer separate from the processor which controls the computer, for controlling access to not only the disk drives connected to the computer but also disk drives connected to other computers as in the present invention. Therefore, Crawford fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

The above noted deficiencies of Crawford are not supplied by Attanasio. Therefore, combining the teachings of Crawford and Attanasio in the manner suggested

by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Attached is a graphical illustration of the features of the present invention as recited in the claims and the teachings of Attanasio.

Attanasio specifically teaches the use of proxy logic 250 as illustrated in Fig. 7 which is used to determine which node the disk being requested is attached. However, as clearly taught by Attanasio the proxy logic is software which exists in a software layer in a memory of the node. The Examiner's attention is directed to col. 2, lines 28-34 and col. 3, lines 41-42 of Attanasio. Attanasio provides that the proxy logic, being that is a software, is executed by the processor itself and execution of the proxy logic causes the processor to access the I/O devices attached to another processor. The Examiner's attention is directed to col. 2, lines 29-31.

It is the intention of Attanasio to provide a system in which the location of data in the memory hierarchy is completely invisible to the application programs as described in col. 1, lines 57-65 and col. 2, lines 51-54 of Attanasio. Thus, in Attanasio since the processor logic is software being executed by the processor itself, the processor still has the load of processing disk requests completely contrary to that of the present invention as clearly recited in the claims.

The attached graphical illustration of the features of the present invention as recited in the claims and the teachings of Attanasio illustrate that according to the present invention since the disk request processing section is separate from the processor, then the applications and the operating system of the processor need not be

aware of the location of the data. In other words according to the present invention as recited in the claims, the disk connections are transparent for the applications and the operating system since the applications and the operating system are executed by the processor and the disk request processing section is separate from the processor does not execute the disk request processing operations.

Attanasio differs substantially from that of the present invention being that since the proxy logic is software that must be executed, then the proxy logic is integrated with the operating system so as to be executed by the processor. Thus, the operating system and the proxy logic must at all times be aware of the location the data thereby requiring that the processor itself execute disk request processing operations. As illustrated in the attached graphical illustration, Attanasio is intended to provide a system whereas all disk connections are transparent only to the applications.

Therefore, the features of the present invention as now more clearly recited in the claims are not taught or suggested by Crawford or Attanasio whether taken individually or in combination with each other as suggested by the Examiner.

Particularly, both Crawford and Attanasio fail to teach or suggest a processor for issuing a disk request to access one of the shared disk and a disk request processing section, separate from the processor, which receives the disk request from the processor, determines whether the disk request requests access to a shared disk connected to the computer or request access to a shared disk connected to another computer and sends the disk request to the shared disk connected to the computer if the disk request requests access to the shared disk connected to the computer and

sends the disk request to the another computer to access a shared disk connected to the another computer if the disk request requests access to the shared disk connected to the another computer as recited in the claims.

Thus, as is quite clear, both Crawford and Attanasio suffer from the same deficiencies and therefore taking these references individually or in combination they would still fail to teach or suggest the features of the present invention as now more clearly recited in the claims. Therefore, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 88-99 and 104 as being unpatentable over Crawford in view of Attanasio and the 35 USC §102(e) rejection of claims 88-104 as being anticipated by Attanasio is respectfully requested.

As indicated above, the present Amendment adds new claims 105-107. New claims 105-107 depend from each of the independent claims 88, 96 and 100 respectively. Therefore, the same arguments presented above with respect to claims 88, 96 and 100 apply as well to new depend claims 105-107.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 88-104.

In view of the foregoing amendments and remarks, Applicants submit that claims 88-17 are in condition for allowance. Accordingly, early allowance of claims 88-17 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (501.34424CX2).

Respectfully submitted,

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